

**SITE SAFETY AND HEALTH PLAN**  
**APPENDIX B**  
**of the**  
**REMEDIAL ACTION MANAGEMENT PLAN**  
**LANDFILL REMOVAL**  
**FORMER NPD LABORATORY**  
**TROUTDALE, OREGON**

*Prepared for:*



**U.S. ARMY CORP OF ENGINEERS**  
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July 18, 2003

Submitted by:

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**Contract No. DACA67-00-D-1009**  
Delivery Order 0014

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**USACE SEATTLE DISTRICT  
FORMER NPD LABORATORY  
LANDFILL REMOVAL  
TROUTDALE, OREGON  
CONTRACT NO. DACA67-00-D-1009**

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Attachment 4 – Utility Clearance Logs

Attachment 5 – Tailgate Safety Meeting Form

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Site Safety and Health Plan  
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Attachment 8 – Visitor Log Sheet

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## ABBREVIATIONS AND ACRONYMS

Cherokee	Cherokee General Corporation
CRZ	Contamination Reduction Zone
dBA	decibels
Farallon	Farallon Consulting, L.L.C.
HAZWOPER	hazardous waste operations
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated biphenyls
PID	photoionization detector
PM	project manager
PPE	personal protective equipment
ppm	part per million
QA	quality assurance
RCRA	Resource Conservation and Recovery Act
SSHO	Site Safety and Health Officer
SSHHP	Safety and Health Plan
SVOCs	semivolatile organic compounds
TPH	total petroleum hydrocarbons
URS	URS Corporation
VOCs	volatile organic compounds

## **1.0 POLICY**

It is the policy of Cherokee General Corporation, so far as is reasonably practicable, to:

- Provide and maintain a work environment that is safe and without risk to health;
- Use, handle, store, and transport articles and substances in a safe manner;
- Provide the information, instruction, training, and supervision necessary to ensure the health and safety of employees, subcontractors, and visitors;
- Provide all workers with the personal protective equipment necessary to safely perform their duties;
- Monitor the effectiveness of safety and health programs; and
- Review and update this policy and program as necessary.

The duty of every Cherokee employee and subcontractor is to exercise responsibility and care to prevent injury and ill health to themselves and others who may be affected by their work.



## **2.0 BACKGROUND INFORMATION**

This Site Safety and Health Plan (SSHP) has been prepared for all employees engaged in the field activities at the former North Pacific Division (NPD) Laboratory (the Site) located at 1491 NW Graham Road, Troutdale, Oregon (Figure 1). This SSHP will be reviewed with all subcontractors engaged in construction activities by the Cherokee Field Superintendent. All Site work will be conducted in a safe manner and will comply with federal, state, and local regulations in addition to the U.S. Army Corps of Engineers (USACE) Publication EM 385-1-1. Cherokee General Corporation is responsible for ensuring compliance with this SSHP. The USACE Construction Quality Assurance Representative also has authority to enforce SSHP.

### **2.1 SITE LOCATION AND BACKGROUND**

The former NPD laboratory facility is located on 6.43 acres of property in the city of Troutdale, in Multnomah County, Oregon. The property is located at 1491 NW Graham Road within the southwest quadrant of Section 24, Township 1 North, Range 3 East Willamette Meridian (USGS 1993). In its present configuration the Site consists of a northern parcel and a southern parcel of land divided by Graham Road (Figure 2). The area is primarily industrial, and the area is zoned for general manufacturing.

The NPD laboratory operated from 1949 until the spring of 1997. The laboratory was used as a materials testing facility for the entire duration of its operation. In 1979, the NPD property was divided by an easement for the extension of NW Graham Road. In 1986, the laboratory expanded operations within the warehouse facility, and began analyzing samples from hazardous and toxic waste sites. Hazardous and toxic samples were analyzed until the cessation of laboratory operations in 1997. In addition to the permanent buildings, mobile trailers have been located at the Site. The trailers once housed the USACE Portland District Resident Office, and now house Mt. Hood Community College.

The northern portion the Site property historically was used as a landfill for disposal of residual bulk materials that had been tested, such as gravel aggregate and concrete. The landfill also was used to dispose of solid waste material such as steel drums of hardened concrete, asphaltic paper, and fiberglass insulation. The landfill was unlined and waste material was placed directly over native soil. Structural concrete test pours were conducted southeast of the landfill in 1952, and southwest of the landfill in the early 1980s. Landfill activities ceased at this location in 1994.

### **2.2 SCOPE OF WORK/PROJECT DESCRIPTION**

Cherokee is under contract to the USACE Contract No. DACA67-00-D-1009 to conduct the landfill removal action at the Site in accordance with the contract technical specifications. The work is being conducted as a follow-up remedial action to the *Draft Final Site Investigation (DFSI) Report*, prepared by URS Corporation (URS), dated August 30, 2002. The remedial

action is being performed to eliminate potential human health risks from the Site by removing soil and waste material from the former landfill.

To accomplish this goal Cherokee will:

- Characterize the landfill contents in situ;
- Prepare the Site for excavation operations by clearing the work area, constructing access roads and work areas, and installing erosion control measures;
- Excavate and remove the landfill contents for disposal;
- Sample, characterize, and dispose of any materials not consistent with the landfill contents waste profile land that are segregated during excavation operations;
- Perform confirmation sampling to ensure cleanup goals have been achieved; and
- Restore the Site by backfilling, grading, and hydroseeding.

### **3.0 PURPOSE AND OBJECTIVES**

The purpose of this SSHP is to provide guidelines and procedures to ensure the health and physical safety of those persons working on the limited removal of soil and waste at the Site. While it may be impossible to eliminate all risks associated with Site work, the goal is to provide state-of-the-art precautionary and responsive measures for the protection of on-Site personnel, and the general public.

The SSHP's objectives are to address the following:

- Hazard analysis
- Employee training
- Employee responsibility
- Personal protective equipment
- Frequency and types of air monitoring
- Site control
- Decontamination procedures
- Emergency response plan
- Spill control and containment
- Employee medical monitoring

## **4.0 RESPONSIBILITIES**

### **4.1 CONTRACTOR - CHEROKEE GENERAL CORPORATION**

Cherokee, as prime contractor for the NPD Landfill Removal Action, is responsible for conducting work, directing subcontractors, and implementing the SSHP. The project superintendent will ensure that proper personal protective equipment (PPE) is available and used in the correct manner, that decontamination activities are carried out correctly, and that employees have been trained to deal with Site emergencies and have knowledge of the local emergency medical system. Cherokee will conduct daily on-Site pre-entry briefings for all persons working on or entering the Site.

### **4.2 PROJECT MANAGER**

Cherokee's Project Manager (PM) will be Mr. Cliff Brown. Mr. Brown has the ultimate responsibility for the health and safety of all personnel throughout the project. Mr. Brown is hazardous waste operations (HAZWOPER)-trained, as well as an Occupational Safety Health Administration (OSHA) hazardous waste operations supervisor. Mr. Brown also receives annual 8-hour HAZWOPER refresher training. Mr. Brown is responsible for procuring proper safety equipment and having it available on Site. Furthermore, Mr. Brown will work directly with the Field Superintendent, and will conduct Site visits to ensure that proper safety procedures are being followed.

### **4.3 FIELD SUPERINTENDENT/SITE SAFETY AND HEALTH OFFICER**

The Field Superintendent for the NPD Landfill Removal Action will be Mr. Rob Copher. Mr. Copher is responsible for directing all on-Site work, including supervising all subcontractors, and acting as the Site Safety and Health Officer (SSHO). Mr. Copher is HAZWOPER-trained, receives annual 8-hour HAZWOPER refresher training, is an OSHA hazardous waste operations supervisor, has been fit-tested to wear a respirator, and receives annual medical surveillance. Mr. Copher is responsible to do the following:

- Ensure and enforce compliance with this SSHP by all on-Site personnel;
- Ensure that Cherokee and all subcontractor personnel have read this SSHP and will conduct field activities in compliance with the specified requirements;
- Immediately stop activities in unsafe conditions or weather extremes;
- Immediately relieve from duty any on-Site personnel that, for any reason, the FS/SSHO feels is unfit or unprepared for field work;
- Enforce the Buddy System on Site (see Section 12.5.1);

- Control Site access by unauthorized personnel. (See Attachment 8 for the visitor log);
- Ensure that the SSHP is revised if Site conditions or the scope of work changes, and that such changes are documented in writing;
- Assume responsibility for upgrading or downgrading Site levels of protection according to SSHP requirements;
- Ensure that there is ready access to the health and safety equipment required by this SSHP, that the equipment is used/worn, and that such equipment is in good working order;
- Ensure that all Site monitoring equipment is calibrated according to manufacturer specifications and is maintained in good working order;
- Inform the PM of any conditions that may require an amendment to the SSHP, or any additional hazard to the health and well-being of employees or the community;
- Conduct daily safety tailgate meetings; and
- Report any health or safety incidents (See Attachment 9 for the Incident Report form).

#### **4.4 SAFETY AND HEALTH MANAGER**

Mr. Tom Flynn, P.E. will serve as the Safety and Health Manager for the NPD Landfill Removal Action Project. Mr. Flynn, an employee of Farallon, has over 12 years of experience in providing industrial hygiene and health and safety consulting services to public and private clients. Mr. Flynn will be responsible for implementing and overseeing the SSHP. Mr. Flynn will also be responsible to:

- Ensure that an approved SSHP is prepared;
- Ensure that all Cherokee General Corporation project personnel have relevant and current training, and that documentation of their training is kept in the project file;
- Ensure that the requirements of the Cherokee General Corporation Health and Safety Program, including the Hazard Communication Program, are implemented;
- Conduct initial Site-specific training;
- Be available for emergency response;
- Provide on-Site consulting as needed;
- Provide support in upgrading or downgrading levels of protection;

- Be responsible for evaluating air monitoring data and for recommending changes in engineering controls as required;
- Review accident reports and results of daily inspections; and
- Serve as a member of the Cherokee quality control staff.

#### **4.5 FIELD TEAM MEMBER RESPONSIBILITY**

##### Field Team Members:

Cherokee General Project Manager	Cliff Brown
Field Superintendent (FS)/Site Safety and Health Officer	Rob Copher
Monitoring and Sampling	John Schmitt
Equipment Operator	Bill McNeil
Laborers	To be Determined

The safety responsibilities of the field team members are to:

- Read, understand, and follow the SSHP and to sign the Field Team Review Form (Attachment 2);
- Follow the directions of the FS/SSHO;
- Attend all daily tailgate safety meetings;
- Perform all work in compliance with this SSHP, and federal, state, and local occupational safety and health regulations;
- Report any conditions that may pose a threat to the health and well being of employees or the community to the Safety and Health Manager and/or the PM; and
- Take all reasonable precautions to prevent injury to themselves and to their fellow team members.

## 5.0 SUBCONTRACTORS AND SUPPLIERS

### 5.1 PROJECT SUBCONTRACTORS AND SUPPLIERS

Cherokee will perform all on-Site construction activities with its own forces. Subcontractors will be used for engineering services sample analysis, transportation, and disposal. The anticipated subcontractors and associated contact information are provided in Table 1.

**Table 5-1**  
**SubContractor and Supplier Contact Information**

Name	Role	Contact Information
<b>Farallon Consulting, L.L.C</b> Richard McManus, P.E.	Engineering Support	320 3 <sup>rd</sup> Avenue Northeast Issaquah, WA 98027 Phone: 425-427-0061 Fax: 425-427-0067
<b>Severn Trent Laboratories, Inc.</b> Tom Boyden	Analytical laboratory for soil sample analysis	5755 8 <sup>th</sup> Street East Fife, WA 98424 Phone: 253-922-2310 Fax: 253-922-5047
<b>Waste Management, Inc.</b> <b>Industrial Landfill Sales</b> <b>Oregon / SW Washington</b> Mark Krening	Waste transport and disposal contractor	7227 N.E. 55th Avenue Portland, OR 97218 Phone: 503-493-7827 Fax: 503-493-7822 Cell: 503-519-3959

### 5.2 SUBCONTRACTOR/SUPPLIERS COORDINATION

Subcontractor and supplier coordination will be the responsibility of the Project Manager and Field Superintendent. All subcontractors involved in daily work will attend daily health and safety meetings.

### 5.3 SUBCONTRACTOR RESPONSIBILITY

Subcontractors are responsible for ensuring that their employees comply with the requirements of the SSHP. The responsibilities of all subcontractors with respect to safety are to:

- Read, understand, and accept the SSHP and sign the Declaration of Understanding (Attachment 3);

- Have all members of the work crew attend daily tailgate safety meetings; and
- Ensure that equipment and other machinery is properly inspected and maintained daily in compliance with manufacturer's specifications.



## **6.0 HEALTH AND SAFETY TRAINING**

This section describes the health and safety training requirements necessary for participating in field operations.

### **6.1 TRAINING REQUIREMENTS**

Cherokee personnel who enter the Site will be able to recognize and understand the potential hazards to health and safety associated with the Site operations. Employees who may potentially be exposed to hazardous substances will have participated in (See Attachment 7 for Employee Training Certificates):

- 40 hours of 29 CFR 1910.120 HAZWOPER;
- 8-hour annual refresher training, as applicable; and
- Three days of field experience under the direct supervision of an experienced supervisor.

The objectives of health and safety training are to:

- Make each team member aware of potential hazards they may encounter;
- Provide workers with the knowledge and skills necessary to perform their work with minimal risk to health and safety;
- Make workers aware of the purpose and limitations of safety equipment; and
- Ensure that workers can safely avoid or escape from an emergency situation.

Workers who may be exposed to special hazards during field operations will receive additional training.

### **6.2 SITE-SPECIFIC TRAINING**

Each worker and Site visitor will be required to read the SSHP and sign an acknowledgement form that they have read and understand the document. In addition, potential hazards associated with each feature of the work will be reviewed with the workers before the work is performed, and procedures used to reduce risk will be discussed and implemented. Activity-specific training will also be provided to Site visitors to ensure that their work or activities will be carried out safely. The SSHP will be responsible for providing workers and visitors this Site- and activity-specific training during the course of the project.

### **6.3 DAILY SAFETY MEETINGS**

Site-specific tailgate safety briefings will be conducted daily by the Cherokee FS/SSHO to discuss the day's operations and to ensure that Site personnel have the necessary information to conduct their jobs safely. The Tailgate Safety Meeting Form (Attachment 5) will be completed during this briefing and will be signed by all personnel in attendance. All Tailgate Meeting Forms will be completed and sent to the Cherokee PM for review. Copies of the safety meeting will be attached to the daily Quality Control (QC) Report for daily submittal. A copy of the Safety Meeting minutes will be provided to the SSHO for inclusion in the project file. A pre-entry briefing is required for all on-Site workers, visitors, and inspectors.

### **6.4 EMERGENCY RESPONSE TRAINING**

Emergency response training will be included as part of the Site-specific training for the NPD Landfill Removal Action. All Cherokee and subcontractor personnel and all visitors will be required to have this training. The Cherokee Field Superintendent will be responsible for ensuring that this training is provided.

## **7.0 SAFETY AND HEALTH INSPECTIONS**

### **7.1 INTERNAL INSPECTIONS**

Daily inspections will be conducted by the Field Superintendent to ensure that all health and safety protocols are being followed, and that all equipment is in working order. These inspections will be recorded in a daily log, where deficiencies will be described in detail. Deficiencies will be recorded on a near-miss incident report form also. All incidents will be discussed during the next safety meeting, and prevention alternatives will be discussed and logged.

In addition to the daily inspections, Site visits will be conducted by the Project Manager to ensure that proper safety procedures are followed.

## **8.0 SAFETY AND HEALTH EXPECTATIONS, INCENTIVE PROGRAMS, AND COMPLIANCE**

### **8.1 SAFETY PROGRAM GOALS**

The goal of Cherokee is to provide a safe work environment for all personnel involved in on-Site activities. Cherokee provides goals and guidelines to ensure that the health and safety of individuals on- and off-Site are protected. Cherokee's health and safety goal is to prevent and minimize all health and safety incidents.

### **8.2 SAFETY INCENTIVE PROGRAMS**

Cherokee rewards employees who display outstanding health and safety activities by reporting an individual's efforts and accomplishments in monthly newsletters and at staff meetings.

### **8.3 POLICIES AND PROCEDURES FOR NON-COMPLIANCE**

In the event of non-compliance with health and safety regulations, the SSHO or PM will take action to correct the situation. The SSHO or PM will document the situation in a daily log and will discuss the situation with the worker. Corrective actions will be taken and will be discussed at the next day's tailgate meeting. Any worker that repeatedly ignores safety plan requirements and safe work practices will be taken off the project.

### **8.4 PROCEDURES FOR HOLDING MANAGERS AND SUPERVISORS ACCOUNTABLE**

The FS/SSHO will be held accountable for adhering to the SSHP by submitting daily health and safety reports to the PM. These reports will be reviewed daily, and any points of non-compliance will be addressed and corrected.

## **9.0 ACCIDENT REPORTING**

In all health and safety incidents, Mr. Cliff Brown, the Project Manager will be notified. Mr. Brown will contact the USACE and any of the following regulatory agencies that may apply:

- Gresham Fire Department (503) 618-2355; 911
- Oregon Emergency Response System
- 24-hour Spill Response (800) 452-0311

Once an emergency situation is under control, an incident report will be completed (Attachment 9). All accidents also will be entered into the daily log and will be discussed at the daily health and safety meeting.

## 10.0 MEDICAL SUPPORT

### 10.1 MEDICAL CENTER

The Legacy Mount Hood Medical Center has been identified as the hospital closest to the Site. Driving directions to the hospital from the Site are as follows:

1. Depart Site on NE Graham Road/NW Graham Avenue
2. Head south of NW Graham Road toward NW Perimeter Way
3. Turn right onto NW Frontage Road
4. Take the ramp toward Portland
5. Merge onto I-84 W/US-30 W
6. Take the 238<sup>th</sup> Drive exit (Exit Number 16) toward Wood Village
7. Turn left onto NE 238<sup>th</sup> Drive
8. NE 238<sup>th</sup> Drive becomes NE 242<sup>nd</sup> Drive. Turn left onto SE Stark Street

See Attachment 1 for map and driving directions.

### 10.2 EMERGENCY PHONE NUMBERS

Emergency telephone numbers will be posted on Site and will be available at all times. These numbers are included on Table 10-1 will include the following:

**Table 10-1**  
**Emergency Contact Phone Numbers**

Name	Address	Telephone No.
<b>Hospital</b>	Legacy Mount Hood Medical Center 24800 SE Stark Street Gresham, Oregon 97030	(503) 674-1122
<b>Police/Sheriff</b>	Troutdale Police Department 141 SE Dora Street Troutdale, OR 97060	(503) 665-5175 <u>or</u> 911
<b>Fire</b>	Gresham Fire Department 1333 NW Eastman Parkway Gresham, OR 97030	(503) 618-2355 <u>or</u> 911
<b>Oregon State Department of Environmental Quality</b>		(503) 229-5696
<b>Oregon 24-hour Emergency Response System</b>		(800) 452-0311
<b>Utilities Location Center</b>		(800) 424-5555

## **11.0 PERSONAL PROTECTIVE EQUIPMENT**

This section details the level of personal protection to be used during all excavation activities. Appropriate levels of protection have been determined using information detailed in the Site hazard assessment. The most common means of exposure to workers are skin contact, ingestion, and inhalation. During all field operations, personnel will wear general safety equipment consisting of hard hats, safety glasses, coveralls, gloves, and chemical-resistant boots with steel toe and shank. Air-purifying respirators with combination organic vapor and HEPA filter cartridges will be available to all personnel, but are not anticipated to be needed for this project.

### **11.1 LEVEL D OPERATIONS**

It is anticipated that Level D PPE, which will be worn at all times by all on-Site personnel, will be required for most work activities on this project. Level D protection consists of the steel toe and shank boots, hardhat, work coveralls, work gloves, and safety glasses. If washable work overalls are worn, they will be laundered intermittently and changed at the end of the day or upon significant contamination, whichever occurs first. If Tyvek® coveralls are worn, they will be properly disposed of after each day's use.

### **11.2 LEVEL C OPERATIONS**

Level C PPE is not anticipated during general excavation activities because photoionization detector (PID) monitoring conducted during DFSI test pit excavations found vapor levels to be less than action concentrations that require a PPE upgrade to Level C. However, it is possible that excavation operations may uncover volatile organic compounds (VOCs) contained in partially-filled paint cans or drums. When PID monitoring indicates concentration of VOCs above action levels, as shown on Table 12-5. If any unknown liquids are encountered personnel will also upgrade to Level C.

Level C protective clothing will consist of the specified Level D safety equipment plus half- or full-face National Institute of Occupational Safety and Health (NIOSH)-approved air purifying respirators with organic vapor/HEPA combination cartridges, rubber work gloves, and Tyvek® coveralls. If Level C is required, appropriate decontamination procedures must be followed. This includes using the following: 1) washing rubber boots; 2) removal and proper disposal of Tyvek® coveralls; 3) washing and removing rubber work gloves; and 4) removal of inner nitrile gloves. If PID concentrations are sustained at or above 50 ppm all work will stop and the work will be re-evaluated.

## 12.0 HAZARD ASSESSMENT/EMERGENCY PLANS

### 12.1 HAZARD ASSESSMENT

This hazard assessment is based on available information concerning the chemical and physical hazards associated with the removal of on-Site wastes and subsequent soil and waste sample collection. All tasks performed may include the following potential hazards outlined below on Table 12-1.

**Table 12-1  
Hazard Assessment**

Tasks	PPE	Potential Hazards	Procedures
<b>General</b>			
Typical work.	Level D.	1. Weather-related incidents.  2. Automobile accidents.  3. Slips and falls.	1. Check weather reports daily. Sampling will not be performed during inclement weather. Sampling may be performed during light rain mist. Wear raincoats. 2. Drive at speed limit or less as needed to keep safe distance from vehicle in front, avoid short stops. 3. Keep area clear of loose debris, and other trip hazards as possible.
Heat or Cold Exposure.			Monitor weather conditions and take breaks as needed for cold or hot weather.
No eating, drinking, or smoking on Site. No facial hair that would interfere with respirator fit.			
A safety meeting will be held with all on-Site personnel each day.			Topics will always include the work scheduled for the day, and restatement of hazards and means to avoid them. Other topics may include sampling in general and advances in technology and how they may be applied to the project.



Tasks	PPE	Potential Hazards	Procedures
<b>Task 1: Waste Characterization</b>			
<b>Subtask 1A: Site Survey and Grid Staking</b>			
Surveying and marking boundaries and grids.	Level D.	<ol style="list-style-type: none"> <li>1. Trip and fall</li> <li>2. Chemical Exposure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Keep area clear of loose debris and other trip hazards to the extent possible.</li> <li>2. Conduct monitoring for chemical constituents in accordance with attached Table 1.</li> </ol>
<b>Subtask 1B: In-Situ Waste Characterization</b>			
Clear in situ sample locations.	Level D.	<ol style="list-style-type: none"> <li>1. Underground installations.</li> </ol>	<ol style="list-style-type: none"> <li>1. Call underground utility locating service for public line location clearance and get list of utilities being contacted. If necessary, coordinate private line locator for private property.</li> </ol> <p>Complete Pre-Mobilization section of Utility Clearance Log (<b>Attachment 4</b>) and adjust sample locations as necessary.</p> <p>Review proposed locations against available construction drawings and known utilities, tanks, product lines, etc.</p>
Mobilize with proper equipment/supplies for excavation.	Level D.	<ol style="list-style-type: none"> <li>1. Injury from heavy equipment.</li> <li>2. Lifting hazards.</li> <li>3. Hand, eye, foot injury from hand tools.</li> <li>4. Trip and fall.</li> <li>5. Noise.</li> </ol>	<ol style="list-style-type: none"> <li>1. Keep clear of heavy equipment. Use agreed upon hand signals. Heed vehicle backup alarm and establish eye contact with operator. Equipment has right-of-way.</li> <li>2. Employ safe lifting procedures.</li> <li>3. Protect extremities with appropriate PPE.</li> <li>4. Keep area clear of loose debris, and other trip hazards to the extent possible.</li> <li>5. Use hearing protection.</li> </ol>
Set up exclusion zone(s), stockpile area, and establish work areas/heavy equipment pathways.	Level D.	<ol style="list-style-type: none"> <li>1. Slip and fall hazards.</li> <li>2. On-Site vehicular accidents involving heavy equipment.</li> <li>3. Noise</li> </ol>	<ol style="list-style-type: none"> <li>1. Set up clear walking paths between workstations.</li> <li>2. Keep clear of heavy equipment. Use agreed-upon hand signals. Heed vehicle backup alarm and establish eye contact with operator.</li> <li>3. Use hearing protection.</li> </ol>

Tasks	PPE	Potential Hazards	Procedures
Assist with set-up of heavy equipment.	Level D.	<ol style="list-style-type: none"> <li>1. Damage caused by heavy equipment while accessing set-up location.</li> <li>2. Struck by equipment.</li> <li>3. Noise</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify clear pathway to excavation and stockpiling locations.</li> <li>2. Provide driver hand signals and guidance as needed to place rig. Maintain eye contact with operator.  Visually inspect equipment (fire extinguisher on board, no oil or other fluid leaks, cabling and associated equipment in good condition, pressurized hoses secured with whip-checks or adequate substitute, jacks in good condition).</li> <li>3. Use hearing protection.</li> </ol>
Commence excavation.	Level D; upgrade to Level C, if necessary.	<ol style="list-style-type: none"> <li>1. Exposure to chemical hazards; organic vapors from full/partially filled drums, paint cans, and contaminated soil.</li> <li>2. Hitting an underground or overhead utility.</li> <li>3. Trip and fall.</li> <li>4. Side wall cave-in.</li> </ol>	<ol style="list-style-type: none"> <li>1. Conduct Air Monitoring As Outlined in Table 1 (attached). If PID concentrations exceed 20 ppm for 20 minutes, upgrade to Level C.</li> <li>2. Have a utility survey done before underground work is started and have a spotter for any work around overhead lines.</li> <li>3. Set up clear walking paths between workstations.</li> <li>4. Maintain required excavation set-backs for workers and equipment and monitor condition of side walls and surrounding ground conditions. Slope/bench walls or shore excavation to prevent cave-in. Keep all spoils &gt; 2 ft from excavation edge. Keep excavation entry controlled and equipped with required ladders and crosswalks. Stand at least</li> </ol>

Tasks	PPE	Potential Hazards	Procedures
		5. Equipment failure  6. Noise.	5 feet from edge of excavation.  5. Perform periodic visual inspections of heavy equipment and keep it at least 5 ft. from excavation edge, or one foot away from the edge for every foot of depth if greater than 5 ft. deep.  6. Use hearing protection.
Collect samples in accordance with sampling plan.	Level D; upgrade to Level C, if necessary.	1. Cave-in of sidewalls if entering excavation.  2. Injury from heavy equipment.  3. Exposure to Site contaminants.  4. Noise	1. Stay out of excavation (collect samples from backhoe bucket).  2. Use agreed-upon hand signals with heavy equipment operators.  3. Monitor air around excavation in accordance with Table 1.  4. Use hearing protection
Backfill excavation.	Level D.	1. Struck by heavy equipment.  2. Sidewall collapse.  3. Future damage or accidents resulting from subsidence.  4. Noise	1. Use agreed-upon hand signals with heavy equipment operators. Maintain eye contact with equipment operators.  2. Maintain appropriate distance from edge of excavation.  3. Compact soils to meet specifications.  4. Use hearing protection.
Clean Site/demobilize.	Level D.	1. Safety hazard left on Site.  2. Lifting hazards.	1. Leave Site clean of refuse and debris.  2. Use proper lifting techniques or use mechanical assistance.
Package and deliver samples to laboratory.		1. Bottle breakage (if any).  2. Back strain.	1. Handle and pack bottles carefully (bubble wrap bags).  2. Use proper lifting techniques.
<b>Task 2: Site Preparation</b>			
<b>Subtask 2A: Equipment and Facilities Mobilization</b>			
Equipment mobilization	Level D.	1. Injury from heavy equipment.  2. Noise	1. Heed backup alarms on vehicles. Use agreed-upon hand signals with heavy equipment operators. Equipment on-Site has right-of-way.  2. Use hearing protection.
<b>Subtask 2F: Roll-off Staging Area Construction</b>			

Tasks	PPE	Potential Hazards	Procedures
Brush and tree removal.	Level D.	1. Injury by hand tools and /or chain saw.  2. Trip and fall.	1. Protect extremities with appropriate PPE. Chain saw will be fully enclosed until use; wear leg chaps and eye protection. All chainsaws must have automatic chain breaks. 2. Keep area clear of loose debris, and other trip hazards as possible.
<b>Subtask 2C: Erosion Control and Security Fence</b>			
Install silt fencing, runoff control measures, and gate.	Level D.	1. Injury by hand tools.  2. Trip/fall	1. Protect extremities with appropriate PPE 2. Keep area clear of loose debris, and other trip hazards as possible.
<b>Subtask 2D: Site Access Road Construction</b>			
Grading and roadbed material placement.	Level D.	1. Slip/fall hazards.  2. Onsite vehicular accident with heavy equipment.	1. Set up clear walking paths between work stations. 2. Keep clear of heavy equipment. Use agreed-upon hand signals. Heed vehicle backup alarm and establish eye contact with operator.
<b>Subtask 2E: Truck Decontamination Pad Construction</b>			
Grading and drainage controls.	Level D.	1. Injury from heavy equipment.  2. Noise	1. Heed backup alarms on vehicles. Use agreed-upon hand signals with heavy equipment operators. 2. Use hearing protection.
<b>Subtask 2F: Roll-off Staging Area Construction</b>			
Grading and roll-off placement.	Level D.	1. Injury from heavy equipment. 2. Noise	1. Heed backup alarms on vehicles. Use agreed-upon hand signals with heavy equipment operators. 2. Use hearing protection.
<b>Task 3: Waste Excavation and Characterization</b>			
<b>Subtask 3A: Dust Control</b>			
Distribution of water.	Level D.	1. Injury from heavy equipment.  2. Noise	1. Heed backup alarms on vehicles. Use agreed-upon hand signals with heavy equipment operators. 2. Use hearing protection.
<b>Subtask 3B: Waste Excavation and Loading</b>			

Tasks	PPE	Potential Hazards	Procedures
Mobilize with proper equipment/supplies for excavation.	Level D.	<ol style="list-style-type: none"> <li>1. Injury from heavy equipment.</li> <li>2. Lifting hazards.</li> <li>3. Hand, eye, foot injury from hand tools.</li> <li>4. Trip and fall.</li> <li>5. Noise.</li> </ol>	<ol style="list-style-type: none"> <li>1. Keep clear of heavy equipment. Use agreed upon hand signals. Heed vehicle backup alarm and establish eye contact with operator.</li> <li>2. Employ safe lifting procedures</li> <li>3. Protect extremities with appropriate PPE</li> <li>4. Keep area clear of loose debris, and other trip hazards as possible.</li> <li>5. Use hearing protection.</li> </ol>
Set up exclusion zone(s), stockpile area, and establish work areas/heavy equipment pathways.	Level D.	<ol style="list-style-type: none"> <li>1. Injury or exposure to public or other onsite personnel.</li> <li>2. Slip/fall hazards.</li> <li>3. Onsite vehicular accident with heavy equipment.</li> <li>4. Noise</li> </ol>	<ol style="list-style-type: none"> <li>1. Implement exclusion zone set-up instructions.</li> <li>2. Set up clear walking paths between workstations.</li> <li>3. Keep clear of heavy equipment. Use agreed-upon hand signals. Heed vehicle backup alarm and establish eye contact with operator.</li> <li>4. Use hearing protection.</li> </ol>
Assist with set up of heavy equipment.	Level D	<ol style="list-style-type: none"> <li>1. Damage caused by heavy equipment while accessing set-up location.</li> <li>2. Struck by equipment.</li> <li>3. Noise</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify clear pathway to excavation and stockpiling locations.</li> <li>2. Keep clear of heavy equipment. Provide as-needed hand signals and guidance to driver to place rig. Maintain Eye Contact with Operator.  Visually inspect equipment (Fire extinguisher on board, no oil or other fluid leaks, cabling and associated equipment in good condition, pressurized hoses secured with whip-checks or adequate substitute, jacks in good condition).</li> <li>3. Use hearing protection.</li> </ol>
Commence excavation.	Level D; upgrade to Level C, if necessary.	<ol style="list-style-type: none"> <li>1. Exposure to chemical hazards; organic vapors from full/partially filled drums, paint cans, and contaminated soil.</li> <li>2. Hitting an underground</li> </ol>	<ol style="list-style-type: none"> <li>1. Conduct Air Monitoring As Outlined in Table 1.</li> </ol>

Tasks	PPE	Potential Hazards	Procedures
		<p>or overhead utility.</p> <p>3. Trip and fall.</p> <p>4. Side wall cave-in.</p> <p>5. Equipment failure.</p> <p>6. Noise.</p>	<p>2. Use hand tools when within 3 feet of utilities.</p> <p>3. Set up clear walking paths between workstations.</p> <p>4. Maintain required excavation setbacks for workers and equipment and monitor condition of side walls and surrounding ground conditions.</p> <p>Slope/bench walls or shore excavation to prevent cave-in. Keep all spoils &gt; 2 ft from excavation edge.</p> <p>5. Perform periodic visual inspections of heavy equipment and keep it at least 5 ft. from excavation edge, or one foot away from the edge for every foot of depth if greater than 5 ft. deep.</p> <p>6. Use hearing protection.</p>
<b>Subtask 3C: Segregation of Waste Inconsistent with Profile</b>			
Store excavated materials properly in accordance with Site-specific requirements.	Level D.	<p>1. Traffic hazard or obstruction or inconvenience to Site operation.</p> <p>2. Improper storage or disposal.</p>	<p>1. Stockpile excavated materials on suitable plastic or in appropriately designed container (Roll-off bins). Cover with plastic and barricade access to waste in accordance with local regulations.</p> <p>2. Have proper storage containment and labeling available onsite.</p>
<b>Subtask 3D: Characterization of Waste Inconsistent with Profile</b>			
Collect samples in accordance with sampling plan.	Level D; upgrade to Level C, if necessary.	<p>1. Injury from heavy equipment.</p> <p>2. Exposure to Site contaminants.</p>	<p>1. Keep clear of heavy equipment. Use agreed-upon hand signals with heavy equipment operators.</p> <p>2. Monitor air around excavation in accordance with Table 1.</p>
<b>Subtask 3E: Roll-Off Pickup and Stockpile Removal</b>			

Tasks	PPE	Potential Hazards	Procedures
Roll off bin removal by heavy equipment	Level D.	1. Injury from heavy equipment.  2. Noise	1. Keep clear of heavy equipment. Heed backup alarms on vehicles. Use agreed-upon hand signals with heavy equipment operators. 2. Use hearing protection.
<b>Subtask 3F: Sub-grade Excavation, Stockpiling, and Characterization</b>			
Commence excavation.	Level D; upgrade to Level C, if necessary.	1. Exposure to chemical hazards. 2. Hitting an underground or overhead utility. 3. Trip and fall. 4. Struck by equipment.  5. Noise.	1. Conduct Air Monitoring As Outlined in Table 1. 2. Use hand tools when within 3 ft. of utilities. 3. Set up clear walking paths between workstations. 4. Keep clear of heavy equipment. Use agreed-upon hand signals. Heed vehicle backup alarm and establish eye contact with operator. 5. Use hearing protection.
Collect samples in accordance with sampling plan.	Level D; upgrade to Level C, if necessary.	1. Injury from heavy equipment.  2. Exposure to Site contaminants. 3. Noise	1. Keep clear of heavy equipment. Use agreed-upon hand signals. Heed vehicle backup alarm and establish eye contact with operator. 2. Monitor air around excavation in accordance with Table 1. 3. Use hearing protection.
<b>Subtask 3G: Incidental Excavation and Material Removal</b>			
Commence excavation.	Level D; upgrade to Level C, if necessary.	1. Exposure to chemical hazards. 2. Hitting an underground or overhead utility. 3. Trip and fall. 4. Struck by equipment.  5. Noise.	1. Conduct Air Monitoring As Outlined in Table 1. 2. Use hand tools when within 3 ft. of utilities. 3. Set up clear walking paths between workstations. 4. Keep clear of heavy equipment. Use agreed-upon hand signals. Heed vehicle backup alarm and establish eye contact with operator. 5. Use hearing protection.
<b>Task 4: Confirmation Sampling and Site Cleanup</b>			
<b>Subtask 4A: Confirmation Sampling</b>			
Collect samples in accordance with sampling plan.	Level D; upgrade to Level C, if necessary.	1. Exposure to Site contaminants.	1. Monitor air around excavation in accordance with Table 1.

Tasks	PPE	Potential Hazards	Procedures
Package and deliver samples to laboratory.		1. Bottle breakage. 2. Back strain.	1. Handle and pack bottles carefully (bubble wrap bags). 2. Use proper lifting techniques.
<b>Subtask 4B: Backfill Sampling</b>			
Collect samples in accordance with sampling plan.	Level D.	1. Exposure to Site contaminants.	1. Monitor air around excavation in accordance with Table 1.
Package and deliver samples to laboratory.		1. Bottle breakage. 2. Back strain.	1. Handle and pack bottles carefully (bubble wrap bags). 2. Use proper lifting techniques.
<b>Subtask 4C: Backfill, Grading, and Compaction</b>			
Backfill excavation.	Level D.	1. Struck by heavy equipment. 2. Sidewall collapse. 3. Future damage or accidents resulting from subsidence.	1. Use agreed-upon hand signals with heavy equipment operators. Maintain eye contact with equipment operators. 2. Maintain appropriate distance from edge of excavation 3. Compact soils to meet specifications.
Grading.	Level D.	1. Struck by heavy equipment. 2. Future damage or accidents resulting from subsidence. 3. Noise	1. Use agreed-upon hand signals with heavy equipment operators. Maintain eye contact with equipment operators. 2. Compact soils to meet specifications. 3. Use hearing protection
Compaction.	Level D.	1. Struck by heavy equipment. 2. Future damage or accidents resulting from subsidence. 3. Noise	1. Use agreed-upon hand signals with heavy equipment operators. Maintain eye contact with equipment operators. 2. Compact soils to meet specifications. 3. Use hearing protection
Clean Site/demobilize.	Level D.	1. Safety hazard left on Site. 2. Lifting hazards.	1. Leave Site clean of refuse and debris. 2. Use proper lifting techniques or use mechanical assistance.
<b>Subtask 4D: Site Cleanup</b>			
	Level D.	1. Safety hazard left on Site. 2. Lifting hazards.	1. Leave Site clean of refuse and debris. 2. Use proper lifting techniques or use mechanical assistance.
<b>Subtask 4E: Seeding</b>			



Tasks	PPE	Potential Hazards	Procedures
Dispersion of Hydroseed.	Level D.	<ol style="list-style-type: none"> <li>1. Struck by Heavy Equipment.</li> <li>2. Struck by flying material.</li> <li>3. Noise</li> </ol>	<ol style="list-style-type: none"> <li>1. Use agreed-upon hand signals with heavy equipment operators. Maintain eye contact with equipment operators.</li> <li>2. Stay away from application area; use eye protection.</li> <li>3. Use hearing protection.</li> </ol>
Site Cleanup.	Level D.	<ol style="list-style-type: none"> <li>1. Safety hazard left on Site.</li> <li>2. Lifting hazards.</li> </ol>	<ol style="list-style-type: none"> <li>1. Leave Site clean of refuse and debris.</li> <li>2. Use proper lifting techniques or use mechanical assistance.</li> </ol>

### 12.1.1 Chemical Exposure

Site workers may be exposed to potentially hazardous chemicals during excavation and removal of soil and collection of soil samples. Possible contaminants on Site discovered at the site during remedial investigation activities include:

- VOCs including carbon tetrachloride and tetrachloroethene;
- Semi-volatile organic compounds (SVOC), including the polyaromatic hydrocarbons (PAHs) compounds benzo(a)pyrene, benzo(a)anthracene, and benzo(b)fluoranthene;
- Heavy metals including arsenic;
- Polychlorinated biphenyl (PCB) hydrocarbon mixtures; and
- Diesel-range and heavy oil-range petroleum hydrocarbons.

These chemicals have been detected at relatively low concentrations in either soil, concrete, or groundwater. It is anticipated that concentrations of these compounds, should they become airborne, would be well below OR-OSHA permissible exposure limits. Measures taken to reduce the possibility of worker exposure to contaminants include PPE (see Section 11) and routine air monitoring using a PID. The following table summarizes the possible routes of exposure, permissible exposure limits, and symptoms of exposure.

**Table 12-2**  
**Chemical Hazards**

Chemical Name	Routes of Exposure	Symptoms of Exposure	Target Organs	Permissible Exposure Limit
Carbon Tetrachloride	inhalation, skin absorption, ingestion, skin	CNS depression, skin and eye irritation; nausea, vomiting; liver, kidney injury,	central nervous system, eyes, lungs,	10 ppm, 8-hour TWA

Chemical Name	Routes of Exposure	Symptoms of Exposure	Target Organs	Permissible Exposure Limit
	and/or eye contact	drowsiness; potential carcinogen	liver, kidneys, skin	25 ppm, ceiling
Tetrachloroethene	inhalation, skin absorption, ingestion, skin and/or eye contact	Eye, skin, respiratory irritation, nausea, flush face, neck; dizziness, headache; liver damage; potential carcinogen	Eyes, skin, respiratory system, liver, kidneys, central nervous system	100 ppm TWA, 200 ppm, ceiling
PAH's	Ingestion, inhalation, skin and eyes	Eye and respiratory irritation, skin irritation, weakness, potential carcinogen	Eyes, skin, respiratory system, skin	None established
Arsenic	inhalation, skin absorption, skin and/or eye contact, ingestion	Ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin, (potential occupational carcinogen)	Liver, kidneys, skin, lungs, lymphatic system	0.010 mg/m <sup>3</sup> 8-hour TWA
PCB's	inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, chloracne; liver damage; reproductive effects; (potential occupational carcinogen)	Skin, eyes, liver, reproductive system	0.5 mg/m <sup>3</sup> TWA (skin)
Diesel/Heavy Oil	Inhalation, ingestion, skin and/or eye contact	CNS effects, headaches, dizziness; respiratory irritation; eye and skin irritation; contact dermatitis	Skin, eyes, respiratory system, central nervous system	400 ppm TWA (as naphtha)

### 12.1.2 Physical Hazards

The principal safety hazards will be those associated with the excavation and removal of potentially contaminated wastes. Excavated soil will be placed a minimum of 2 feet from the edge of the excavation site. Personnel will not enter a trench or excavation unless the sides are properly sloped or braced, and means of easy egress have been provided. Personnel are not allowed to be in a trench or excavation when digging with heavy equipment is occurring.

When soil and waste material is being loaded to or unloaded from the truck, personnel will remain clear of the area. Oversize waste (if encountered) will be loaded using guide wires to help

position the debris. Personnel will not be near or under the material, in order to prevent injury should debris fall. Straps and chains used to lift materials will be inspected for wear, cracks, or deterioration. Backup alarms to warn workers of moving equipment will be in working order. Rope or ribbon barricades will be installed circling a minimum of 25 feet from the operation (whenever possible) to prevent bystanders from entering the area. Additional physical risks include slipping on muddy or unstable ground, incurring back strain from lifting heavy objects, and incurring injury while performing equipment maintenance. The following safety practices will be observed to minimize these risks:

- Workers will wear sturdy steel-toed work boots;
- Workers will be trained in proper lifting techniques to reduce back strain injuries associated with lifting heavy objects; and
- Lockout/tagout and zero mechanical state procedures will be used to prevent injury while performing equipment maintenance.

#### **12.1.3 Cold Stress**

Appropriate warm clothing and heated rest areas will be available if outside temperatures fall below 40°F for more than two hours.

#### **12.1.4 Heat Stress**

Operations involving high air temperatures, radiant heat sources, high humidity, direct physical contact with hot objects, or strenuous physical activities have a high potential for inducing heat stress in employees engaged in such operations. When work is required in these conditions, workers will be monitored for symptoms of heat stress. Workers also will be given frequent breaks and will be encouraged to drink plenty of fluids. Cool water and electrolytes will be provided.

#### **12.1.5 Noise**

Excessive exposure to noise is not expected during Site activities. If noise levels above 85 decibels (dBA) are suspected, noise monitoring will be conducted. In general, excess noise is suspected when conversation among persons standing next to one another is not audible. Earplugs or earmuffs will be used if noise levels exceed 85 dBA. In addition, earplugs will be available on Site at all times for worker comfort. Workers wearing hearing protection will be enrolled in a hearing protection program.

#### **12.1.6 Electric Hazards**

All electrical work, usage, installation, and wire capacities will be in accordance with the provisions of the National Electric Code (National Fire Protection Program Association 70). Power cords will be UL-listed heavy duty and will include a grounding prong. All power cords and receptacles will be inspected before use to ensure that casings are not cracked, grounding prongs are attached, and that there are no other visible defects. If a defect is found, the cord,

receptacle, or equipment will be tagged and placed out of use until it is fixed or disposed of. Proper lockout procedures will be employed during heavy equipment maintenance activities.

#### 12.1.7 Fire and Explosion

The risk of fire or explosion exists during Site activities. *No Smoking* signs will be posted and enforced. In addition, grounding and bonding wires will be utilized when transferring flammable liquids to prevent sparks. Flammable liquids or materials will not be stored on Site. Good housekeeping practices will be employed to reduce the likelihood of fire and/or explosions.

Fire extinguishers (two 20-pound ABC) will be stored in Cherokee vehicles located on the Site and available to all Site personnel. Personnel will be trained in the proper use of fire extinguishers, techniques for smothering fires, and emergency evacuation procedures. All personnel will be instructed to summon the local fire department using the FS's on-Site cell phone.

In the event of a fire at the Site, personnel will:

1. Dial 911 to notify the fire department;
2. Evacuate all personnel to a safe area;
3. Attempt to extinguish the fire with a portable fire extinguisher or by smothering;  
**Note: No fire that is in imminent danger of contact with explosives, petroleum products, or chemicals will be fought; and**
4. Request assistance from an emergency response unit (e.g., ambulance, fire department, hospital, poison control center) as needed for injury or for exposure to hazardous chemicals that occur during suppression of the fire.

The following parties will be notified by the Cherokee Field Superintendent:

- Local fire department (dial 911);
- USACE Construction QA Representative – Michael Gross
- Project Manager – Cliff Brown

## 12.2 EMERGENCY RESPONSE PLAN

Emergency response procedures have been developed for extraordinary events that could occur during field operations. These events include accidents and/or injuries, chemical exposure, spills, and fires.

The following actions will be implemented in the event of an emergency:

1. First aid or other appropriate initial action will be administered by those closest to the incident or event. This assistance will be coordinated by Cherokee's Field

Superintendent and will be conducted so that those rendering assistance are not placed in a situation of unacceptable risk. The primary concern is to avoid placing a greater number of personnel in jeopardy.

2. The Cherokee General Corporation FS/SSHO will notify the PM.

### **12.2.1 Accidents and Injuries**

Determine if emergency response (fire or ambulance) staff is necessary. If so, dial 911 on cell phone or closet available phone. Provide the location of the injured person and other details as requested. If taking the injured individual to the hospital is the best course of action, follow the directions to the hospital provided in Attachment 1.

Every accident is a unique event that must be dealt with by trained personnel responding in a calm and controlled manner. In the event of an accident or unusual incident, the primary objective is to provide the appropriate initial response to assist those in jeopardy without placing additional personnel at unnecessary risk.

#### **12.2.1.1 Accident or Injury in Contaminated Area**

If a person working in a contaminated area is physically injured, Red Cross first aid procedures will be followed. Cherokee employees are first aid- and CPR-trained. Depending on the severity of the injury, emergency medical response may be sought. If the injured individual can be moved, s/he will be taken to the edge of the work area (on a stretcher, if necessary) where contaminated clothing will be removed (if possible), emergency first aid will be administered, and transportation to a local emergency medical facility will be awaited.

#### **12.2.1.2 Accident or Injury in Non-contaminated Area**

For accidents or injuries in a non-contaminated area, the procedures immediately above will be followed, with the exception that the injured individual would not be moved, and no removal of contaminated clothing would be necessary.

### **12.2.2 Chemical Exposure**

If an injury to a worker is chemical in nature (e.g., overexposure), the following first aid procedures are to be instituted as soon as possible:

- **Eye Exposure**

If contaminated solid or liquid gets into the eyes, the eyes will be washed immediately at the emergency eyewash station with large amounts of water, lifting the lower and upper lids. Medical attention will be obtained immediately. Use of contact lenses is not permitted in designated exclusion zones.

- **Skin Exposure**

If skin contamination occurs, the affected area will be promptly washed with soap or mild detergent and water. If contaminated solids or liquids penetrate clothing, the clothing will be removed immediately and the skin will be washed with soap or mild detergent and water. Medical attention will be obtained if symptoms warrant.

- **Inhalation**

If a person breathes in a large volume of potentially toxic vapors, the individual will be moved to fresh air at once. If breathing has stopped, artificial respiration will be performed. The affected person will be kept warm and at rest. Medical attention will be obtained immediately.

- **Ingestion**

If contaminated solid or liquid is swallowed, medical attention will be obtained immediately.

### **12.3 PROCEDURES FOR REPORTING TO STATE, LOCAL, FEDERAL AGENCIES**

In all medical emergency or injury cases, Mr. Cliff Brown, the Project Manager, will be notified. Mr. Brown will contact the USACE and any of the following regulatory agencies that may apply:

- Gresham Fire Department (503) 618-2355 or 911
- Oregon Emergency Response System
  - 24-hour Response (800) 452-0311

### **12.4 EMERGENCY EVACUATION PROCEDURES**

In the event of a Site emergency, all workers at the Site will be notified by Cherokee's Field Superintendent to stop work immediately and offer assistance. Those not needed for immediate assistance will decontaminate per normal procedures and leave the Site.

### **12.5 GENERAL SAFE WORK PRACTICES**

#### **12.5.1 Buddy System**

A minimum of two employees in constant communication (either visual or vocal) with each other is required to perform Site work.

#### **12.5.2 Site Communications**

Communication will be established between field personnel and the Field Superintendent to relay information in the event of any emergency.

The following hand signals will be used to communicate with others when not within talking distance or when radio communications are not established:

- **Hand gripping throat ..... OUT OF AIR; CAN'T BREATHE**
- **Grip buddy's wrist or waist ..... LEAVE AREA IMMEDIATELY**
- **Both hands atop head ..... NEED ASSISTANCE**
- **Finger touching nose or respirator .. I CAN SMELL CONTAMINATION**
- **Thumbs up ..... I'M O.K.; I'M ALRIGHT; I UNDERSTAND**
- **Thumbs down ..... NO; NEGATIVE**

A complete list of emergency telephone numbers will be posted at all telephones on the project Site. Cellular phones will be available in work vehicles.

#### **12.5.3 Minimization of Contamination**

Use of personnel and equipment in the contaminated area will be minimized, consistent with effective Site operations. Contamination will be avoided wherever possible by using plastic drop cloths and equipment covers, and by avoiding puddles and kneeling on contaminated ground.

#### **12.5.4 Sampling Procedures**

Employing standard operating procedures will minimize the risk of personnel's exposure to hazardous materials during sampling, packaging, shipping, and analysis; and will minimize the risk of exposure to spilled or residual waste materials.

#### **12.5.5 Safety Equipment**

A first aid kit and fire extinguisher will be available on Site whenever work is being performed. A fire extinguisher will be stored within 50 feet of the work operation. This equipment will be inspected and/or tested at least monthly and testing will be noted in the logbooks. Any deficiency noted will be corrected immediately.

#### **12.5.6 Forbidden Activities**

The following activities are forbidden on the Site:

- a. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer or ingestion of materials, in any area designated as contaminated;
- b. Ignition of flammable liquids or starting open flames; and
- c. Use of nonprescription controlled substances or alcohol on Site or working under the influence thereof.

## 12.6 RESPIRATORY PROTECTION PLAN

Cherokee maintains a written program establishing policies and procedures for the effective use of respirators to protect employees from airborne contaminant exposure. These procedures are mandatory for all employees performing (or exposed to) the following work activities:

- Soil excavation, and
- Soil sampling.

### 12.6.1 Selection of respirators

Only NIOSH-approved respirators will be used by Cherokee staff members. Respirators selected are listed below:

**Table 12-3  
Respirator Selection**

Type of Respirator	Operations/Conditions of Use	Limitations of Use
Half-face with organic vapor chemical cartridges and mist overfilter	Excavation and soil sampling	Not to be used in high exposures (over 1,000 parts per million)
Supplied-air respirators	Excavation and soil sampling	Refer to manufacturer's recommendation

Selection of respirators is based upon the type of hazard exposure present and the level of protection provided. Proper fit and comfort also are considerations in the selection process.

The life of each respirator or cartridge will vary depending upon job duties and actual time in use. Each respirator will have some limitations; therefore, the manufacture's instructions and recommendations must be referenced. Air purifying respirators (disposable mask, half- or full-face cartridge respirators) cannot be used in confined spaces where the environment may have less than 19.5 percent oxygen, or in fumigation operations.

**Table 12-4  
Air Purifying Respirators**

Type of Respirator	Operations/Conditions of Use	Limitations of Use
Half-face with combination organic vapor/HEPA	Excavation and soil sampling when PID concentrations exceed	Not to be used in concentrations above 50 ppm as measured on PID nor in



chemical cartridges	20 ppm for 2 minutes	oxygen deficient atmospheres
Supplied-air respirators	Excavation and soil sampling when PID concentrations exceed 50 ppm for 2 minutes or in oxygen deficient atmosphere (below 19.5% oxygen)	Refer to manufacture's recommendations

Only those employees who have been deemed physically able to perform the necessary work while using a respiratory device will be permitted to use a respirator on the job, as supported by a physical examination and physician's certification of fitness to wear a respirator.

If an employee experiences a problem while wearing a respirator, the condition must be reported immediately to the SSHO.

#### **12.6.2 Use and Availability of Respirators**

Only appropriate, properly fitted respirators will be used. The SSHO will issue respirators, replacement parts, cartridges and filters, and cleaning materials. The SSHO will provide training on respirator use, care, and maintenance before employees will be allowed to perform job activities requiring respirator use.

A record will be kept of those employees who have received respirator training. Each user must understand and apply the content of the respirator training to the daily use, care of, and storage of respiratory equipment.

#### **12.6.3 Fit Testing**

Because respirator fit is extremely important, respirator fit testing will be used to determine how well the tight-fitting respirator face piece seals against the user's face. If there is not a good face-to-face piece seal, contaminants could pass around the face piece and be breathed into the lungs.

Respirator fit testing may be done using two basic methods: qualitative or quantitative fit testing. Most employers use qualitative methods since quantitative procedures may be expensive and require complicated equipment. This document will discuss only the qualitative methods currently in use.

Qualitative fit testing must be done upon initial assignment of a respirator. Once the employee passes a fit test using an appropriate respirator, simple daily negative and positive pressure fit checks should be performed to ensure that the respirator is being worn properly.

Respirators should not be worn if the wearer has facial hair (beards or stubble). Head coverings, scars, dentures, and missing teeth also can affect respirator fit. Because eye glasses may interfere with respirator fit; using a full-face piece with a spectacles insert may resolve the problem.

Employees will not be allowed to cut off respirator straps, leave the straps off, or wear the straps loosely.

#### **12.6.4 Proper Respirator Storage and Maintenance**

Non-disposable respirators will be cleaned and dried after each day's use and then placed in a clean container or plastic bag for storage. If a respirator is used by more than one person, it also must be fully disinfected after each use. If a respirator is assigned to only one individual, it must be disinfected at least once each week. Disinfecting involves the following procedure:

- Remove the cartridge or filters from the face piece (filters and cartridges must not be washed);
- Immerse the face piece in a warm soap solution. Gently scrub the respirator with a cloth or soft brush. Remove all foreign material from the surface of the rubber exhalation valve, valve seats, and face piece;
- Disinfect with:
  - A commercial solution; or
  - Two tablespoons of bleach per gallon of water; or
  - Two teaspoons of tincture of iodine per gallon of water;
- Rinse the respirator in clean warm water and allow to dry before storing; and
- Store in a clean container that is free of exposure to chemicals. A three-pound coffee can with a tight-fitting lid makes an excellent storage container.

Any respirator malfunction will be reported to the SSHO, who will evaluate the problem and ensure that proper replacement parts or a new respirator is provided.

Each person who is assigned a respirator will be responsible to maintain the equipment, and will routinely inspect the respirator before and after use for worn or dirty parts. Worn parts will be replaced immediately.

Respirators will be inspected monthly by the SSHO. The inspection will include an evaluation of the following:

- Tightness of connections;
- Condition of the face piece;
- Condition of the valves; and
- Pliability and cleanliness of the face piece.

### 12.6.5 Chemical Monitoring Action Levels

- The level for respirator use indicated below is that concentration at which a respirator must be worn. It does not require that the job stop. The respirator is a personal protective device to be used while determining why the concentration of the contaminants have become elevated, and to take actions to reduce the concentrations by engineering controls such as water mist, spray foam, plastic cover, etc.
- The level for work stoppage indicated below is that concentration at which work on the job must stop. The SSHO will determine why exposures have reached that concentration and how they can be reduced. Site evacuation is not necessary at this level. Stopping operations may not reduce the possibility that the concentration will continue to rise. Implement engineering or other controls to reduce contaminant concentrations; then resume work.

**Table 12-5**  
**Action Level Table For Chemical Monitoring**

Chemical (or Class)	Monitoring Equipment	Task	Monitoring Frequency/ Location	Level for Respirator Use	Level for Work Stoppage
Volatile Organic Vapors.	FID/PID as appropriate for chemicals of concern. Read manual to determine.	From start of mobilization to completion and demobilization.	Sampling should be continuous during the project while disturbing potentially contaminated material. At least every 15 minutes in the breathing zone.  Sample at the exclusion zone boundaries every 30 minutes. Continuously sample during each soil sampling interval.	20 ppm above background sustained in breathing zone for 2 minutes don respirator.	50 ppm above background in breathing zone.
Oxygen/LEL .	Combustible Gas Meter.	Disruption of soil.  Removal of contaminated soil.	From start of disruption of potentially contaminated soil through removal of any contaminated soil.		> 10% LEL.  < 19.5% Oxygen

Chemical (or Class)	Monitoring Equipment	Task	Monitoring Frequency/ Location	Level for Respirator Use	Level for Work Stoppage
Total particulate.	MIE Data Ram.	Soil disruption during excavation.	Continuous. Move the device around the boundaries of the exclusion zone.	10 mg/m <sup>3</sup> .	15 mg/m <sup>3</sup> .
Temperature .	WBGT Meter.	All tasks when temperature is > 95°F.	Operate meter continuously during work at temperature > 95°F.	Not Applicable.	Take breaks in accordance with ACGIH TLV guidance.

## 12.7 PLAN FOR PREVENTION OF ALCOHOL AND DRUG ABUSE

### 12.7.1 Policy Statement

Cherokee is committed to maintaining a drug- and alcohol-free workplace for the health and safety of its employees, and has instituted a zero-tolerance level program. All employees are notified that Cherokee supports and will comply with the requirements of the Drug-Free Workplace Act of 1988, and all applicable regulations issued thereunder, as well as any more stringent rules created by other federal or state agencies, when applicable.

The Drug-Free Workplace Act specifically requires Cherokee to notify each employee that as a condition of employment, each employee must:

- Comply with Cherokee's drug-free workplace policy, and
- Notify Cherokee of any conviction of a drug-related offense committed in the workplace, within five (5) days of conviction.

Any employee who violates the Cherokee policy will be subject to disciplinary action up to and including termination of employment.

### 12.7.2 Prohibitions

Cherokee's drug- and alcohol-free workplace policy prohibits employees from engaging in any of the following activities:

- Unauthorized use or possession; or any manufacture, distribution, dispensation or sale of alcoholic beverages or controlled substances on Cherokee premises, while on Cherokee business, while in Cherokee-supplied vehicles, or during working hours;

- Storing in a locker, desk, automobile, or other repository on Cherokee premises any controlled substance whose use is unauthorized;
- Being under the influence of alcoholic beverages or any controlled substance on Cherokee premises, while on Cherokee business, or while in Cherokee-supplied vehicles;
- Any possession, use, manufacture, distribution, dispensation, or sale of alcoholic beverages or controlled substances off Cherokee premises that adversely affects the individual's work performance, or the safety of others at work, or Cherokee's regard or reputation in the community;
- Failure to adhere to the requirements of any drug or alcohol treatment or counseling program in which the employee is enrolled;
- Failure to notify Cherokee of any conviction under criminal drug statutes of a workplace offense, within five (5) days of the conviction; and
- Refusal to sign a consent to abide by Cherokee's drug- and alcohol-free workplace policy.

#### **12.7.3 Authorized Use of Prescribed Medicine**

If an employee is undergoing prescribed medical treatment with any drug that may alter their physical or mental ability to safely perform their job, they must report this treatment to their supervisor, who will determine whether a temporary change in job assignment is warranted during the period of their treatment.

#### **12.7.4 Drug and Alcohol Testing**

Cherokee reserves the right to request that employees submit to random, post-accident, or periodic drug and alcohol testing. Employees also will be asked to submit to testing when observed behavior or other information suggests use of drugs or alcohol in violation of the drug- and alcohol-free workplace policy. An employee's failure to submit to these tests may result in termination of employment.

Cherokee reserves the right to request that employees submit to pre-employment or re-employment testing for illegal drugs.

If an employee has been referred for drug or alcohol testing, s/he will be asked to report to a testing facility to be determined by Cherokee. Cherokee will not accept test results from any testing facility other than the determined facility.

If an employee tests positive, s/he will be subject to the disciplinary actions outlined in this policy, up to and including termination of employment, at Cherokee's sole discretion.

Test results will remain confidential and will be available to appropriate management and its designee(s) only.

If an employee is terminated for reasons related to drug and alcohol testing, s/he may receive a copy of test results upon request.

## 13.0 SITE CONTROL

### 13.1 SITE SECURITY

No one will be allowed to enter the Site Exclusion Zone (discussed below) without permission from Cherokee, without the appropriate level of training, and they must adhere to applicable portions of this SSHP. The work areas will be clearly delineated by rope or barricade, and posted to discourage public on-lookers from entering the Site. All personnel, employees, vehicles, and equipment entering and leaving the Site will be observed, and a record of their presence will be kept. All personnel working at the Site and all visitors will be required to sign in and sign out on the Site-entry checklist. All visitors will be escorted on the Site. No visitors will be permitted around work areas unless the individual is an official visitor or is a federal or state employee with appropriate training (29 CFR 1910.120) and is escorted by the SSHO or other designated escort.

### 13.2 SITE WORK ZONES

The job Site will be configured into three zones. The configuration can be modified according to the nature and extent of contamination and the risk of chemical exposure.

The work zones will be determined on Site, based on wind speed and direction, physical characteristics of the Site (e.g., fencing, buildings), and daily field operations. Each work zone will be clearly delineated and posted. The three work zones will be as follows:

- **Exclusion Zone.** The work and excavation areas, which involve removal operations. The exclusion zone will be a minimum of 25 feet around the work, excavation, and stockpiling and cleaning areas. The area will be clearly delineated by rope or barricade tape, and will be posted. Only persons authorized by this SSHP may enter the Exclusion Zone.
- **Contamination Reduction Zone (CRZ).** This zone will be established to act as a transition zone for any necessary equipment or personnel decontamination, and for inspection activities. The CRZ is located just outside the exclusion zone. It is anticipated that a CRZ is not needed for this project unless Site conditions change and personnel are required to wear Level C protection.
- **Support Zone.** The area outside both the exclusion zone and CRZ, used to stage and clean equipment and other support facilities. This area will be far enough away from work areas to protect bystanders.

### 13.3 DECONTAMINATION PROCEDURES

In order to ensure that any detected or suspected contamination is controlled and not spread from the Site, decontamination procedures will be employed for both equipment and personnel.

All decontamination activity will be monitored to ensure compliance with the procedures described below.

### 13.3.1 Personnel

PPE used during this project will include: hard hats, safety glasses, coveralls, gloves, and boots with steel toe and shank. Workers will take the following steps to decontaminate PPE:

- Brush off loose soil from clothing and shoes;
- Remove protective clothing affected if brushing of loose soil does not appear to remove contamination;
- Remove chemical resistant gloves or leather gloves; and
- Affected workers also will wash their hands and face, and will shower as soon as possible.

#### 13.3.1.1 Equipment

Equipment that will be used during this project includes a Caterpillar 235 (or equivalent) excavator, tandem truck trailers, a Case 580 loader/backhoe, shovels, and hand tools. All equipment will be decontaminated before it is removed from the work area. Decontamination procedures will consist of removing soil from equipment using brushes, brooms, or shovels. The removed soil will then be swept up and placed in the soil stockpile pending disposal. Particular care will be given to tires, scoops, and other components that may be in direct contact with contaminants. All trucks transporting wastes from the Site will go through the truck decontamination pad.

Sampling instruments and other non-disposable equipment will be kept clean in disposable protective covers. Dippers, scoops, and similar devices for solid samples will be placed in plastic bags or metal drums for decontamination or disposal.

### 13.3.2 EMERGENCY DECONTAMINATION

In the event that a seriously injured person is contaminated, Site personnel will wrap the injured individual in clean plastic sheeting to prevent contamination of the ambulance. Individuals whose injuries are less serious will have their protective clothing carefully cut off before they are transported to the hospital.

### 13.3.3 DISPOSAL OF WASTE/WASTE CHARACTERISTICS

**Waste Generation (type[s]/quantities expected):**

Anticipated: ☒ YES ☐ NO

Types: ☐ Liquid ☒ Solid Sludge ☐ Other \_\_\_\_\_



Quantity (*Expected Volume*): Soil – 12,000 tons

**Characteristics (*EXPECTED*):**

- ☐ Corrosive      ☐ Flammable/Ignitable      ☐ Radioactive      ☒ Toxic  
☐ Reactive      ☐ Unknown      ☐ Other (*specify*) .

**Packaging requirements for waste material:**

Soil will be transported off the Site directly to a landfill. During confirmation sampling, soil will be stockpiled on, and covered with, plastic sheeting.

**Disposal and/or Treatment Methods Proposed:**

It is anticipated that most of the landfill contents removed from the Site will be landfilled as either non-hazardous state-regulated waste, or hazardous waste suitable for direct bury.

Landfill contents may be uncovered that, when characterized, will require other means of disposal. Disposal requirements will be determined at that time.

### **13.4 RECORD KEEPING**

To ensure SSHP implementation, many Site activities will be documented. Documentation will apply to: pre-activity briefings; weekly employee Field Team Review safety briefings; Site sign-in log; respirator fit test work sheets; health and safety log notes (which include instrument calibration records, sampling data, monitoring results, and incident reports); chemical safety data sheets; and other records identified in the SSHP.

LANDFILL REMOVAL  
Site Safety and Health Plan  
Former NPD Laboratory, Troutdale, Oregon

Site control  
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LANDFILL REMOVAL  
Site Safety and Health Plan  
Former NPD Laboratory, Troutdale, Oregon

Attachments  
07/18/03

## **ATTACHMENTS**

**ATTACHMENT 1**  
**Site Map/Hospital Location Map**

**ATTACHMENT 2  
FIELD TEAM REVIEW FORM**

I have read and reviewed the most recent revision of the Site Health and Safety Plan (SSHP) for the \_\_\_\_\_ Project. I understand the information contained therein and will comply with all aspects of this SSHP.

**Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**This information is in case of an emergency only:**

**Person(s) to notify in case of emergency:** \_\_\_\_\_

**Relationship to you:** \_\_\_\_\_

**Their Daytime Phone:** \_\_\_\_\_

**Name of Your Physician:** \_\_\_\_\_

**Your Medical Coverage:** \_\_\_\_\_ **Policy #:** \_\_\_\_\_

**Date of Birth:** \_\_\_\_\_

**Known Allergies:** \_\_\_\_\_ **Allergies to Medications:** \_\_\_\_\_

**Known Medical Conditions:** \_\_\_\_\_

**Special Information:** \_\_\_\_\_

## **DECLARATION OF UNDERSTANDING**

DATE \_\_\_\_\_

**ATTACHMENT 4  
UTILITY CLEARANCE LOG**

**Project:** \_\_\_\_\_

**Location:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Instructions.** This checklist has to be completed by a Cherokee staff member as a safety measure to insure that all underground utility lines, other underground structures as well as above-ground power lines are clearly marked out in the area selected for boring or excavation. **DRILLING OR EXCAVATION WORK MAY NOT PROCEED UNTIL \_\_\_\_\_ HAS BEEN CONTACTED, FACILITY OPERATORS HAVE LOCATED UTILITIES WITHIN THE FACILITY, UTILITIES AND STRUCTURES ARE MARKED, AND THIS CHECKLIST HAS BEEN COMPLETED.**

**Assignment of Responsibility.** Cherokee is responsible for having underground utilities and structures located and marked.

**Drilling or Excavation Sites.** Attach a map of the property showing the drilling or excavation sites, if sites are widely separated, several map(s) clearly indicating the area(s) checked for underground utilities or underground structures and the location of above-ground power lines.

**Utilities and Structures**

Type	Not Present	Present	How Marked <sup>1</sup>
Petroleum products line			
Natural gas line			
Steam line			
Water line			
Sewer line			
Storm drain			
Telephone cable			
Electric power line			
Product tank			
Septic tank/drain field			
Other			

<sup>1</sup>Flags, paint on pavement, wooden stakes, etc.

**Client Approval** \_\_\_\_\_

(with attached map)

**NAME**

**COMPANY**

**PHONE**

Name and affiliation of person who marked out underground lines or structures.

**NAME**

**COMPANY**

**PHONE**

Cherokee General Corporation

Field

Superintendent

Date Completed

**-ATTACHMENT 5  
TAILGATE SAFETY MEETING FORM**

<b>Date:</b>	
<b>Start Time:</b>	
<b>Issues Discussed:</b>	
<b>Protective Clothing Equipment:</b>	
<b>Chemical Hazards:</b>	
<b>Physical Hazards:</b>	
<b>Emergency Procedures:</b>	
<b>Hospital/Clinic:</b>	
<b>Directions/Route:</b>	
<b>Special Equipment:</b>	
<b>Other:</b>	
<b>Attendees</b>	
<b>Print Name</b>	<b>Signature</b>
<b>Meeting Conducted by:</b>	



**ATTACHMENT 6**  
**INSTRUMENT CALIBRATION & AIR MONITORING FORMS**

**INSTRUMENT CALIBRATION/CHECK LOG**

Date	Instrument/ Model no.	Serial No.	Battery Check OK?	Zero Adjust OK?	Calibration Gas (ppm)	Reading (ppm)	Leak Check	Performed By	Comments

## AIR MONITORING LOG

[illegible]

**ATTACHMENT 7**  
**EMPLOYEE TRAINING CERTIFICATES**

**ATTACHMENT 8**  
**VISITOR LOG SHEET**

**PRINTED NAME                      SIGNATURE                      REPRESENTING                      TIME IN                      TIME OUT**


## ATTACHMENT 9 INCIDENT REPORT

### Near-Miss, Accidental Injury, Occupational Illness, or Work Place Incident

<b>INCIDENT TYPE</b>			<b>INCIDENT DATE:</b>	
<input type="checkbox"/> FATALITY <input type="checkbox"/> LOST WORKDAY <input type="checkbox"/> LW RESTRICTED DUTY <input type="checkbox"/> OSHA MEDICAL OR ILLNESS W/O LW <input type="checkbox"/> FIRST AID	<input type="checkbox"/> INDUSTRIAL NON-RECORDABLE <input type="checkbox"/> NON-INDUSTRIAL <input type="checkbox"/> OFF-THE-JOB INJURY <input type="checkbox"/> MVA <input type="checkbox"/> FIRE	<input type="checkbox"/> SPILL/LEAK <input type="checkbox"/> PRODUCT INTEGRITY <input type="checkbox"/> EQUIPMENT <input type="checkbox"/> BUSINESS INTERRUPTION <b>(TO BE COMPLETED BY HEALTH AND SAFETY COORDINATOR)</b>	<input type="checkbox"/> GENERAL LIABILITY <input type="checkbox"/> CRIMINAL ACTIVITY <input type="checkbox"/> NOTICE OF VIOLATION <input type="checkbox"/> NEAR- MISS	
<p>This report must be completed by the employee or Health and Safety Coordinator immediately upon learning of the incident. The completed report must be reviewed and signed by a Principal, within 24 hours of the incident, even if employee is not available to review and sign. Employee or employee's doctor must submit a copy of the doctor's report to Jennifer-Rae Smith within 24 hours of the initial exam and any subsequent exams. After hours or weekends, please call Tina Huff: Mobile (425) 260-8118 or Home (425) 271-3489 or Amy Essig Desai: Mobile (425) 828-2278 or Home (425) 828-2278..</p>				
<b>EMPLOYEE INFO</b>				
LAST NAME:	FIRST NAME AND MIDDLE INITIAL:	TITLE:	DATE OF BIRTH:	
EMPLOYMENT STATUS: <input type="checkbox"/> FULL-TIME <input type="checkbox"/> PART-TIME <input type="checkbox"/> HOURLY-AS-NEEDED			HOW LONG?	
DATE OF INJURY OR ONSET OF ILLNESS (MM/DD/YYYY)			TIME OF EVENT OR EXPOSURE: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	
<b>INJURY OR ILLNESS INFO</b>				
EXACT LOCATION OF INCIDENT (GEOGRAPHICAL LOCATION, FLOOR, BUILDING, ETC.)				
COUNTY:		ON EMPLOYER'S PREMISES? <input type="checkbox"/> YES <input type="checkbox"/> NO		
COMPLETE DESCRIPTION OF INCIDENT-- INCLUDE SPECIFIC ACTIVITY DURING INCIDENT (e.g., LIFTING, PUSHING, WALKING.)				
DESCRIBE THE EQUIPMENT, MATERIALS, OR CHEMICALS THAT DIRECTLY HARMED THE PARTY (e.g., THE MACHINE THAT EMPLOYEE STRUCK AGAINST OR THAT STRUCK EMPLOYEE; THE VAPOR INHALED OR MATERIAL SWALLOWED; WHAT THE EMPLOYEE WAS LIFTING, PULLING.):				
DESCRIBE THE SPECIFIC INJURY OR ILLNESS (e.g., CUT, STRAIN, FRACTURE, SKIN RASH.):				
BODY PART(S) AFFECTED (e.g., BACK, LEFT WRIST, RIGHT EYE):				
DATE EMPLOYER WAS NOTIFIED:			TO WHOM REPORTED:	
<b>MEDICAL PROVIDER (HOSPITAL, DOCTOR, CLINIC, ETC.) INFO</b>				
NAME AND ADDRESS OF HEALTH CARE PROVIDER:				PHONE NO.:
TREATED IN EMERGENCY ROOM: <input type="checkbox"/> NO <input type="checkbox"/> YES			HOSPITALIZED OVERNIGHT AS INPATIENT: <input type="checkbox"/> NO <input type="checkbox"/> YES	

## INCIDENT REPORT (continued)

### INJURY/ILLNESS SEVERITY

- ☐ NO TREATMENT REQUIRED
- ☐ FIRST AID ONLY
- ☐ MEDICAL TREATMENT
- ☐ FATALITY -- ENTER DATE:

### TIME LOSS (Check all that apply)

- ☐ RETURN TO WORK THE NEXT DAY
- ☐ NO TIME LOSS
- ☐ RESTRICTED ACTIVITY  
BEGIN DATE:  
RETURN DATE:
- ☐ LOST WORKDAY, NOT AT WORK  
BEGIN DATE:  
RETURN DATE:

### WORKDAY PHASE

- ☐ PERFORMING NORMAL WORK DUTIES
- ☐ MEAL PERIOD
- ☐ REST PERIOD
- ☐ ENTERING/LEAVING
- ☐ CHRONIC EXPOSURE
- ☐ OTHER, SPECIFY:

<b>MOTOR VEHICLE ACCIDENT (MVA)</b>				PROFESSIONAL DRIVER?		<input type="checkbox"/> YES <input type="checkbox"/> NO		
TOTAL YEARS DRIVING:		COMPANY VEHICLE? <input type="checkbox"/> YES <input type="checkbox"/> NO		VEHICLE TYPE:				
NO. OF VEHICLES TOWED			NO. OF INJURIES:		NO. OF FATALITIES:			
<b>THIRD PARTY INCIDENTS</b>								
NAME OF OWNER				ADDRESS				PHONE NO.:
DESCRIPTION OF DAMAGE: .								
INSURANCE INFORMATION:								
WITNESS NAME				ADDRESS				PHONE NO.:
WITNESS NAME				ADDRESS				PHONE NO.:
<b>REVIEWED BY</b>								
NAME (PRINT)		SIGNATURE		TITLE		DATE		